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This filing is being made on a
streamlined basis on 15 days'
notice under Section 204(a)(3)
of the Communications Act.

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Vice President, Access and Network Interconnection Marketing



April 2, 1998

Transmittal No. 494

Secretary
Federal Communications Commission
Washington, D.C. 20554

ATTENTION: Common Carrier Bureau

The accompanying tariff filing, issued by the NYNEX Telephone Companies (NTCs) on behalf of New York Telephone Company, and bearing Tariff F.C.C. No. 1, effective April 17, 1998, is sent to you for filing in compliance with the requirements of the Communications Act of 1934, as amended. This filing consists of tariff pages as indicated on the following check sheets:

<u>Tariff F.C.C. No.</u>	<u>Check Sheet No.</u>
1	528th Revised Page 1 88th Revised Page 2 42nd Revised Page 2.1 123rd Revised Page 3 88th Revised Page 4 25th Revised Page 4.1 75th Revised Page 5 74th Revised Page 6 94th Revised Page 7 59th Revised Page 7.1 Original Page 7.2 67th Revised Page 8 32nd Revised Page 8.1 88th Revised Page 10 46th Revised Page 10.1 160th Revised Page 11 133rd Revised Page 12 65th Revised Page 12.1 7th Revised Page 13.1

This filing provides additional rates and regulations under Expanded Interconnection to introduce virtual collocation.

Supporting information as required under Sections 61.38 and 61.49 of the Commission's Rules is included with this filing.

Acknowledgement and date of receipt of this filing are requested. A duplicate letter of transmittal is attached for this purpose.

An amount of \$600.00 has been electronically transmitted to the Mellon Bank in Pittsburgh, PA, in accordance with the fee program procedures.

The original of this transmittal letter is being hand-delivered today to the Secretary. In addition, copies of this transmittal have been hand-delivered today to the Commercial Contractor and the Chief, Tariff Review Branch.

Questions on the payment or inquiries, comments and petitions regarding this filing should be addressed to Mary Liz Hepburn at the above address. Additionally, all inquiries, comments and petitions in connection with this filing may also be sent via facsimile at 202-336-7858.

11 (encl) 2 (62)

Attachments:

Duplicate Letter
Tariff Pages
Supporting Information

Copy of Letter and Attachments, Concurrently delivered to:
Chief, Tariff and Pricing Analysis Branch (Public Reference Copy)
International Transcription Services, Inc.

NYNEX TELEPHONE COMPANIES

TARIFF F.C.C. NO. 1

EXPANDED INTERCONNECTION THROUGH VIRTUAL COLLOCATION

Transmittal No. 494

April 02, 1998

<u>SECTION</u>	<u>DESCRIPTION</u>
1	Service Description and Justification
2	Compliance with Commission Rules
3	Cost and Rate Development
4	Demand and Revenue Forecasts
5	Workpapers

SECTION 1

SERVICE DESCRIPTION AND JUSTIFICATION

Introduction

The Bell Atlantic Telephone Companies¹ hereby submit tariff pages and supporting documentation necessary to introduce Expanded Interconnection Through Virtual Collocation in New York. This new service will be included in NYNEX Telephone Companies Tariff F.C.C. No. 1, Section 28 - Expanded Interconnection.² Bell Atlantic is making this filing in response to requests by customers to connect interstate Switched and Special Access services to virtual collocation arrangements.

This filing is consistent with the Commission's collocation policies established in CC Docket No. 91-141 for expanded interconnection under virtual collocation.³

Service Description

Virtual Collocation provides a customer, referred to herein as a collocator or interconnector, with access to Bell Atlantic's central offices for the purpose of connecting the interconnector's transport facilities with Bell Atlantic's access services at a point within Bell Atlantic's central office. The collocator purchases the necessary transmission equipment and may have Bell Atlantic or an approved vendor install it in relay racks in the same area as similar

¹ The Bell Atlantic telephone companies are: Bell Atlantic - Washington, D.C., Inc.; Bell Atlantic - Maryland, Inc.; Bell Atlantic - Virginia, Inc.; Bell Atlantic - West Virginia, Inc.; Bell Atlantic - Delaware, Inc.; Bell Atlantic - New Jersey, Inc.; and Bell Atlantic - Pennsylvania, Inc., New York Telephone Company and New England Telephone and Telegraph Company.

² The former NYNEX Telephone Companies, New York Telephone Company and New England Telephone and Telegraph Company, merged with Bell Atlantic in August, 1997. Until the Bell Atlantic and NYNEX tariffs are merged, the former NYNEX Telephone Companies will continue to offer interstate access services under the NYNEX tariff.

³ See Expanded Interconnection with Local Telephone Company Facilities, CC Docket No. 91-141, Memorandum Opinion and Order, 9 FCC Rcd 5154 (1994).

equipment owned by Bell Atlantic. The collocator is required to transfer ownership of the transmission equipment to Bell Atlantic, for the nominal price of \$1.00. Bell Atlantic exercises exclusive physical control and dedicates this transmission equipment to the exclusive use of the collocator, and provides installation, maintenance, and repair services on a non-discriminatory basis. An illustration of the Virtual Collocation equipment configuration is diagrammed on Exhibit 1.

With this filing, Expanded Interconnection Through Virtual Collocation will be offered in New York initially via transmission equipment at OC3, OC12, and OC48 levels with interconnection to Switched and Special Access Services at DS1 and DS3 electrical tributaries interconnected at the DSX bays. Also available will be OC3 and OC12 level optical connections to a Bell Atlantic Fiber Distribution Frame (FDF) for equipment to equipment connections. Such requirements for interconnection (the appropriate mix) will be set at the time of original order and installation. This will allow the collocator to have terminal equipment placed in the central office for the required interconnection to Bell Atlantic services. The collocator will provide its own fiber transport for the input side of the arrangement.

Virtual Collocation Components /Rate Elements

Expanded Interconnection Through Virtual Collocation consists of the following components:

- 1.0 Applications
 - 1.1 Initial Application
 - 1.2 Augment Application
- 2.0 Engineering and Implementation
 - 2.1 Bell Atlantic installed Equipment
 - 2.2 Vendor installed Equipment
 - 2.3 Site Augmentation
 - 2.4 Hardware / Software Upgrades
- 3.0 Expanded Interconnection Access Cable (EIAC)
- 4.0 Virtual Office Channel Termination (VOCT)
- 5.0 Fiber Placement and Splice Element
- 6.0 Entrance Outside Plant Fiber Termination Element
- 7.0 Fiber Distribution Frame (FDF) to Virtual Serving Arrangement (VSA) -
Equipment and Cabling
- 8.0 Equipment Support
- 9.0 Spare Equipment Cabinet Space
- 10.0 DC Power
- 11.0 Training, Escort, and Equipment Servicing

1.0 Applications

To establish or augment a virtual collocation arrangement, Bell Atlantic requires the collocator to submit an Application Fee along with their written request for service. If a collocator cancels its application request prior to Bell Atlantic completing the work activities associated with the application fee, any unused portion of the application fee will be refunded. A written application request must be submitted for software upgrades or to add cards to

partially-equipped transmission equipment, but no application fees will apply to these types of requests. A collocator may file the following two types of applications for space and equipment to be installed in Bell Atlantic's central office.

1.1 Initial Application

The Application Fee is submitted with the collocator's request to install transmission equipment and cabling in a Bell Atlantic central office for the purpose of establishing a virtual collocation arrangement.

1.2 Augment Application

An Application Fee is submitted with a collocator's request to augment its existing virtual collocation arrangement. It applies to re-cabling existing transmission equipment or installation and cabling of partially equipped transmission equipment.

2.0 Engineering and Implementation

Engineering and Implementation involves Bell Atlantic's planning, engineering, project management, and administrative and billing functions associated with implementing the virtual collocation arrangement, as well as the actual installation of the virtually collocated transmission equipment. If a collocator cancels its request prior to Bell Atlantic completing the work activities associated with the engineering and implementation fees, any unused portion of the fee will be refunded. Bell Atlantic will apply the engineering and implementation fees based on the following applications.

2.1 Engineering and Implementation - Bell Atlantic installed Equipment

Upon the collocator's acceptance of Bell Atlantic's site implementation proposal, Bell Atlantic begins the planning, engineering, and project management functions associated with implementing the virtual collocation arrangement. The collocator may choose an approved Bell Atlantic vendor to install the transmission equipment associated with its virtual collocation arrangement. In addition to planning, engineering, and site preparation expenses, this fee also recovers those expenses associated with Bell Atlantic performing

the actual installation of the collocator's equipment. This fee applies once whether the transmission equipment is installed during the initial implementation of the virtual collocation arrangement or subsequent to it.

2.2 Engineering and Implementation - Vendor installed Equipment

This application covers the same Bell Atlantic functions associated with the planning, engineering, and site preparation as mentioned in section 2.1. With this application, the collocator has selected an approved Bell Atlantic vendor to install the transmission equipment associated with their virtual collocation arrangement.

2.3 Engineering and Implementation - Site Augmentation

Based on the collocator's requirements, the virtual collocation site may require the installation of additional transmission equipment or the reconfiguration of existing equipment with associated cabling augments.

2.4 Engineering and Implementation Fee - Hardware / Software Upgrades

As the Collocator's transmission equipment matures, the hardware and software used may need to be upgraded. This application involves the work activities performed by Bell Atlantic to upgrade the collocator's equipment with hardware (i.e. adding electronic cards) or software.

3.0 Expanded Interconnection Access Cable (ELAC) Charge

The ELAC is the physical cable and splicing of the cable connection between the collocator's transmission equipment and Bell Atlantic's distribution/cross connect frame. This may be installed by Bell Atlantic or a Bell Atlantic approved vendor. For this reason, the cable component was separated from the engineering and implementation rate element. If the collocator elects to contract directly with an approved vendor, the collocator will be responsible for providing the cable, which must conform to Bell Atlantic design specifications.

Bell Atlantic developed a separate one-time charge assessed at the time the cable is installed to recover the cost of the physical cable. The charge is assessed based on the cable parameters, i.e. DS1 cable, which has the capacity for 28 DS1s, or DS3 cable, or one Fiber pair.

4.0 Virtual Office Channel Termination (VOCT) Charges

In addition to the physical EIAC, Bell Atlantic provides cable support and cable termination functions associated with the service connection between a collocator's transmission equipment and Bell Atlantic's distribution frame/bay located in the central office. This element is for interconnection to Switched and Special Access at DS1 and DS3 electrical tributaries interconnected at either on the Main Distributing Frame ("MDF") or the Digital Signal Cross-connect ("DSX") bays. Also available will be OC3, OC12 and OC48 level optical level connections to a Bell Atlantic Fiber Distribution Frame ("FDF") for equipment to equipment connections.

5.0 Fiber Placement and Splicing Element

The Fiber Placement and Splicing element covers the fiber cable placement from manhole zero⁴ to the Alternate Splicing Area ("ASA"). The ASA is a splicing box in Bell Atlantic's cable vault where the outside cable is connected or spliced to the central office inside cable. This activity must be performed by Bell Atlantic.

6.0 Entrance Outside Plant Fiber Termination Element

The Fiber Termination element covers the investments associated with providing and servicing the Optical Fiber Non-Metallic Riser-rated (OFNR) type fibers and associated FDF frame termination. This element includes the support service for the collocator provided, Bell Atlantic-owned outside plant cable from manhole zero to the fiber optic termination frame, including the fiber splice enclosure. It is assessed in units of 12 strands terminated.

⁴ Manhole zero is the point outside the central office where ownership of the interconnector's cable is transferred to Bell Atlantic.

7.0 Fiber Distribution Frame (FDF) to Virtual Serving Arrangement (VSA) - Equipment and Cabling

The Equipment FDF to VSA element covers the fiber cabling and termination equipment necessary to connect the collocator's fiber cable from Bell Atlantic's FDF to the collocator's VSA. The VSA is defined by the collocator and may include a wide range of OC3, OC12, and OC48 transmission equipment. The terminating equipment includes a fiber jumper cable and associated splicing equipment.

8.0 Equipment Support

The Equipment Support element covers the equipment relay rack and the associated central office floor space associated with the collocator's Virtual Serving Arrangement. It also covers environmental support functions such as heat, air conditioning, and alarming equipment used in support the collocator's transmission equipment. The collocator's equipment is mounted to a relay rack in the central office. The Equipment Support element does not include DC power, which is offered as a separate rate element.

9.0 Spare Equipment Cabinet Space

The collocator is required to equip its VSA with a storage cabinet to house spare circuit pack equipment to be used for maintenance purposes. The size of the cabinet required will be based on the equipment manufacturer's recommended number of spare circuit packs that should be maintained at the VSA, unless otherwise mutually agreed to by Bell Atlantic and the collocator. The spare circuit pack cabinet requires the same amount of floor space as the half relay rack space recovered in the Equipment Support element.

10.0 DC Power

DC Power is offered as a power source on an as-needed basis with back-up capability to cover short-term disruptions in electrical service. This component includes the use of power batteries, rectifiers, and back-up generators by the collocator. Any AC power that is converted

into DC power for use by the collocator is included in this element. This element is assessed to the collocator on a per nominal negative 48-volt, per amp basis based on the equipment manufacturer's specifications, with a maximum of 20 amps per A & B feed.

11.0 Training, Escort, and Equipment Servicing

Training of Bell Atlantic technicians is required if the collocation customer requests an arrangement which consists of equipment that Bell Atlantic does not use in that particular central office. The collocator will be responsible for the arrangements and payment for the required training on the particular type of virtual collocation equipment. This training will be required for no fewer than 5 Bell Atlantic employees in the administrative work unit responsible for servicing the equipment.

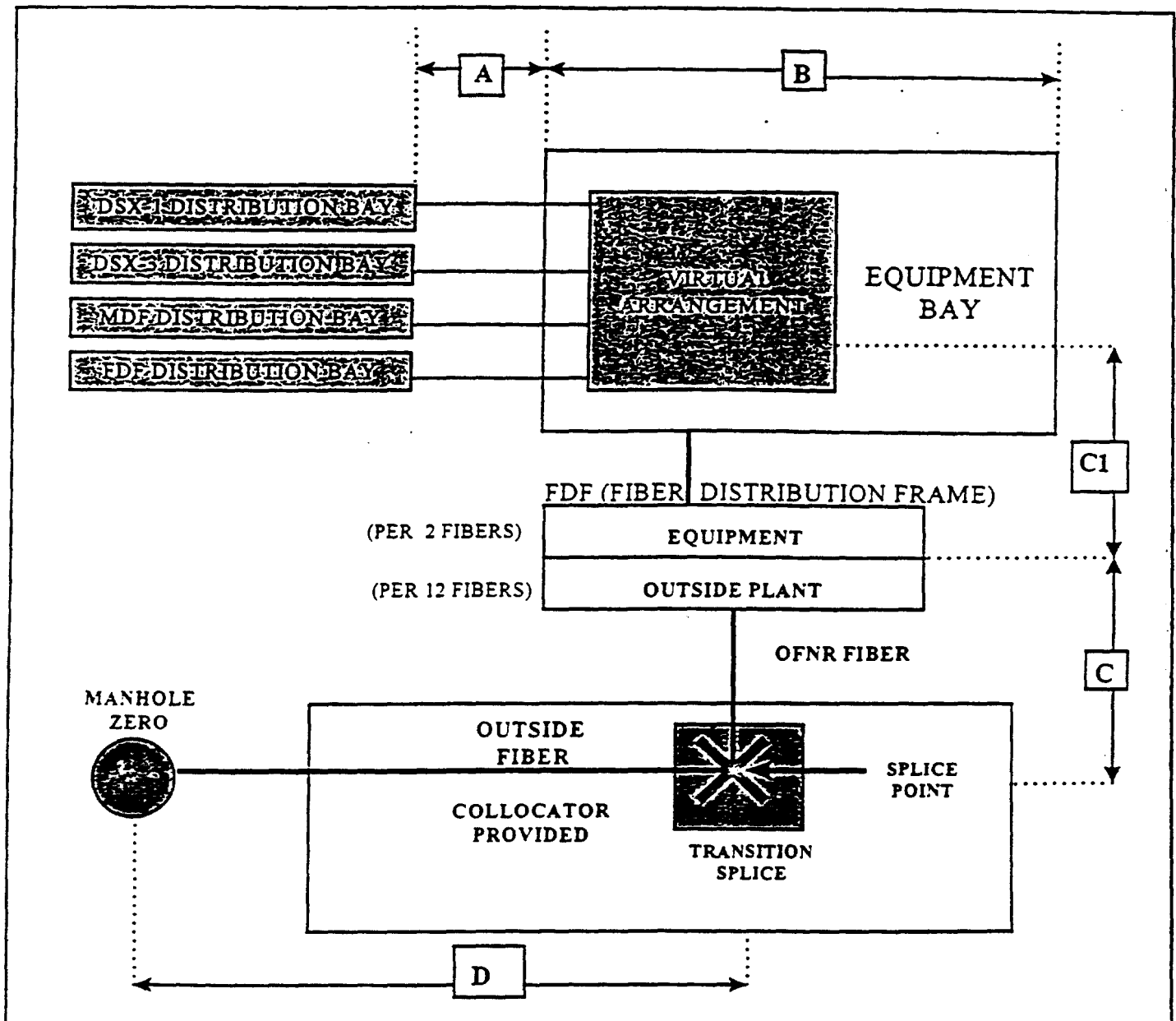
Escort service will be provided by Bell Atlantic to collocator customers for site tours of the central office. The collocator will be responsible for notifying Bell Atlantic in advance of their request and providing a reasonable amount of time for Bell Atlantic to meet their request.

Equipment Servicing, in the form of maintenance activities performed on the collocator customer's Virtual Serving Arrangement will be provided by Bell Atlantic technicians as requested and specifically directed by the collocator.

Justification

Expanded Interconnection Through Virtual Collocation enhances Bell Atlantic's Expanded Interconnection services. This filing is being made primarily because customers have requested it, so that they can use their state virtual collocation arrangements for connections to interstate access services.

EXPANDED INTERCONNECTION THROUGH VIRTUAL COLLOCATION

SERVICE COMPONENTS

- A EXPANDED INTERCONNECTION ACCESS CHARGE /
VIRTUAL OFFICE CHANNEL TERMINATION
- B VIRTUAL EQUIPMENT ARRANGEMENT
- C ENTRANCE FIBER TERMINATION CHARGE
- C1 EQUIPMENT FIBER TERMINATION CHARGE
- D FIBER PLACEMENT & SPLICE CHARGE

Note: (OFNR) OPTICAL FIRE RETARDANT NON-METALIC RISER CABLE

SECTION 2

COMPLIANCE WITH COMMISSION RULES

Sections 61.38(b)(2) and 61.49(g) and (h) of the Commission's rules specify the information that must be submitted in support of tariffs for new expanded interconnection rate elements. This material includes: (1) a study containing a projection of costs for a representative 12-month period; (2) estimates of the effect of the new service on traffic and revenues; and (3) supporting workpapers for estimates of costs, demand, and revenues. Section 3 (Cost and Rate Development), Section 4 (Demand and Revenue Forecasts), and Section 5 (Workpapers) contain the information required to comply with these rules.

SECTION 3

COSTS, DEMAND, RATES, AND REVENUES

Costs

Bell Atlantic performed a unit cost analysis to determine the investments required and the costs incurred to provide Expanded Interconnection Through Virtual Collocation. Bell Atlantic's proposed rates for this service are based on the costing methodology associated with the following service elements:

- 1.0 Application Fees
 - 1.1 Initial Application Fee
 - 1.2 Augment Application Fee
- 2.0 Engineering and Implementations Fees
 - 2.1 Bell Atlantic installed Equipment
 - 2.2 Vendor installed Equipment
 - 2.3 Site Augmentation
 - 2.4 Hardware / Software Upgrades
- 3.0 Expanded Interconnection Access Cable (ELAC) Charge
- 4.0 Virtual Office Channel Termination (VOCT) Charge
- 5.0 Fiber Placement and Splice Charge
- 6.0 Entrance Outside Plant Fiber Termination Charge
- 7.0 Fiber Distribution Frame (FDF) to Virtual Serving Arrangement (VSA) -
Equipment and Cabling Charge
- 8.0 Equipment Support Charge
- 9.0 Spare Equipment Cabinet Space Charge
- 10.0 DC Power Fee
- 11.0 Training, Escort, and Equipment Servicing Charges

1.0 Applications

To establish or augment a virtual collocation arrangement, Bell Atlantic requires the collocator to submit a non-refundable Application Fee with their written request for service. A written application request must be submitted for software upgrades or to add cards to partially-equipped transmission equipment, but no application fees will apply. There are two type of virtual collocation applications:

1.1 Initial Application

This non-recurring rate element recovers Bell Atlantic's expenses associated with processing the application, performing an initial site visit, engineering evaluation, the preparation of a site implementation proposal, and all associated administrative and billing activities. This fee is required per virtual collocation request, per central office or other Telephone Company location where the customer requests to establish virtual collocation. Refer to Workpaper 5-1 in Section 5.

1.2 Augment Application

This non-recurring rate element recovers Bell Atlantic's expenses associated with processing the application, performing a site visit, and augmenting the initial site implementation proposal to address the new requirements. Refer to Workpaper 5-2 in Section 5.

2.0 Engineering and Implementation Fees

Engineering and Implementation fees recover Bell Atlantic's planning, engineering, project management, and administrative and billing functions associated with implementing the virtual collocation arrangement, as well as the expenses associated with the actual installation of the virtually collocated transmission equipment. Bell Atlantic will apply the engineering and implementation fees based on the following applications.

2.1 Engineering and Implementation Fee - Bell Atlantic installed Equipment

This non-recurring rate element recovers Bell Atlantic's expenses associated with the planning, engineering, administrative, and site preparation activities. This fee also recovers those expenses associated with Bell Atlantic performing the actual installation of the collocator's equipment. Refer to Workpaper 5-3 in Section 5.

2.2 Engineering and Implementation Fee - Vendor installed Equipment

This non-recurring rate element recovers the Bell Atlantic's expenses associated with the planning, engineering, administrative, and site preparation covered in Section 2.1. Bell Atlantic incurs a slightly higher project management expense to coordinate the transmission equipment installation with the collocator's approved installation vendor. This fee does not recover any expense associated with the selected vendor's actual installation work. Refer to Workpaper 5-4 in Section 5.

2.3 Engineering and Implementation Fee - Site Augmentation

This non-recurring rate element recovers Bell Atlantic's planning, engineering, administrative, and site augmentation expenses incurred to meet the augment requirements of the existing customer. Refer to Workpaper 5-5 in Section 5.

2.4 Engineering and Implementation Fee - Hardware / Software Upgrades

This non-recurring rate element covers the work activities performed by Bell Atlantic to upgrade the collocator's equipment with hardware (i.e. adding electronic cards) or software. Refer to Workpaper 5-6 in Section 5.

3.0 Expanded Interconnection Access Cable (ELAC) Charge

This non-recurring rate element recovers Bell Atlantic's expense to purchase the physical cable and perform the engineering and cable installation activities associated with connecting the cable between the collocator's transmission equipment and Bell Atlantic's distribution/cross connect frame. The charge is assessed based on the cable parameters, i.e. DS1 cable, which has

the capacity for 28 DS1s, or DS3 cable, or one fiber pair. Bell Atlantic recovers this one-time charge at the time the cable is installed. Refer to Workpaper 5-7 in Section 5.

4.0 Virtual Office Channel Termination (VOCT) Charges

These monthly recurring charges recover Bell Atlantic's investments associated with providing cable support and cable termination functions associated with the standard arrangements of OC3, OC12, and OC48 levels with interconnection to switched and special access services at DS1 and DS3 electrical tributaries and optical level connections. The cable support recovers the direct, common and building investments associated with placing/connecting the ELAC cable and the cable termination function recovers the equipment investment associated with cable termination block/panel at Bell Atlantic's distribution/cross connect frame. Bell Atlantic proposes to recover this cost through monthly recurring charge. Refer to Workpapers 5-8, 5-10, and 5-12 for the cost and rate development details and Workpapers 5-9, 5-11, and 5-13 for the unit investment details.

5.0 Fiber Placement and Splicing Charge

This charge recovers Bell Atlantic's labor expense to install the fiber cabling from manhole zero to the Alternate Splicing Area ("ASA"). This charge is based on time and materials for fiber cable placement and termination from the manhole through the transition splice area of the cable vault up to the fiber optic termination frame located on the equipment floor. The labor rate charge covering this activity is referenced in the NYNEX F.C.C. No. 1 Tariff, Section 31.13.2.

6.0 Entrance Outside Plant Fiber Termination

This monthly recurring rate element recovers Bell Atlantic's investments associated with the fiber cabling and fiber distribution frame ("FDF") termination equipment necessary to connect the collocater's cable from the ASA to the Virtual Serving Arrangement ("VSA"). The fiber cable is provisioned with 12 fiber conductors and the associated splicing and termination

equipment. This charge is assessed in units of twelve fiber strands and the associated splicing equipment. Refer to Workpaper 5-14 for the cost and rate development details and Workpaper 5-15 for the unit investment details.

7.0 Fiber Distribution Frame (FDF) to Virtual Serving Arrangement (VSA) - Equipment and Cabling

This monthly recurring rate element recovers Bell Atlantic's investments associated with the terminating shelf at the FDF, the jumper cable connecting the FDF to the VSA, and the associated fiber cabling and termination equipment necessary to connect the collocator's fiber cable from Bell Atlantic's FDF to the collocator's VSA. Refer to Workpaper 5-16 for the cost and rate development details and Workpaper 5-17 for the unit investment details.

8.0 Equipment Support

This monthly recurring rate element recovers Bell Atlantic's investment to provide equipment relay racks to house the collocator's transmission equipment associated with the VSA. This charge also recovers environmental support and central office alarming expenses to support the collocator's transmission equipment. This charge will be assessed on a per half relay rack basis with the rate banded to comply with Bell Atlantic's existing central office banding. Refer to Workpaper 5-18 for the cost and rate development details and Workpaper 5-19 for the unit investment details.

9.0 Spare Equipment Cabinet Space

This monthly recurring rate element recovers the central office floor space associated with the collocator's spare parts equipment storage cabinet. For this rate element, the amount of central office floor space required is the same as that of the half equipment relay rack space recovered by the Equipment Support rate element. Bell Atlantic's investment of central office floor space will be recovered through a monthly recurring charge. Refer to Workpaper 5-20 in Section 5.

10.0 DC Power

This monthly recurring rate element recovers Bell Atlantic's investment required for the power batteries, rectifiers, and the back-up generators. Refer to Workpaper 5-21 for the cost and rate development details and Workpaper 5-22 for the unit investment details.

11.0 Training, Escort, and Equipment Servicing Fees

Training fees to be paid by the collocator will cover any tuition, materials, airfare, lodging, meals and the central office technician time at the fully assigned rate. The labor rate charge covering Training fees is referenced in the NYNEX F.C.C. No. 1 Tariff, Section 31.13.2.

Escort fees will be assessed at the fully assigned labor rate for a Central Office Technician, and will be assessed on a per-first $\frac{1}{2}$ hour basis and in $\frac{1}{4}$ hour increments thereafter. The labor rate charge covering Escort fees is referenced in the NYNEX F.C.C. No. 1 Tariff, Section 31.13.2.

Equipment Servicing fees, will be assessed at the fully assigned labor rate for a Central Office Technician, and will be assessed on a per-first $\frac{1}{2}$ hour basis and in $\frac{1}{4}$ hour increments thereafter. The labor rate charge covering Labor fees is referenced in the NYNEX F.C.C. No. 1 Tariff, Section 31.13.2.

Rate Development

To develop the rates for Expanded Interconnection Through Virtual Collocation, Bell Atlantic first identified the unit investments for each of the associated rate elements and then multiplied the investment by account-specific annual cost factors ("ACFs") to calculate the direct cost components of depreciation, cost of money, income taxes, maintenance, administration, and other taxes. For the rate elements associated with VOCT cabling, only the operating expense portion (maintenance and administration) of the ACFs were used to determine the direct

operating cost, because the collocater is purchasing the physical cable in the ELAC Cable charge. The application of these factors to the investments results in annual direct costs that will recover the direct cost of providing support services. The direct recurring and non-recurring costs are used to determine the minimum price level for the rate element.

The Commission requires that overhead loadings for Collocation services be no greater than the overhead loadings for comparable services, absent justification. As required, Bell Atlantic's proposed virtual collocation rates carry the same, or lower overhead loading factors as are carried by comparable DS1, DS3, SONET services. These factors were derived from the overhead loading factors for comparable services that the Commission prescribed for New York in its Physical Collocation Tariff Order, CC Docket No. 93-162, Second Report and Order, FCC 97-208 (rel. June 13, 1997, Appendix D. The overhead loadings used for the fiber ELAC and VOCT rate elements were based on the overhead used for comparable access services.

Cost Ratios

Bell Atlantic developed ratios in order to compare Direct Cost to Investment and Direct Cost to Rate for its monthly recurring rate elements. These ratios are displayed at the bottom of the respective Workpapers.

Rates

Workpapers 5-1 through 5-22 contain the proposed rate for the associated Expanded Interconnection Through Virtual Collocation rate elements. In addition, the rates are also displayed on Workpaper 5-23, Demand, Costs, Rates, and Revenues in Section 5.

SECTION 4

DEMAND AND REVENUE FORECASTS

Demand Forecast

Bell Atlantic's demand forecast process involved evaluating the actual demand experienced for physical collocation arrangements over the past years and the number of customer requests for virtual collocation in the New York jurisdiction. The demand forecast is displayed on Workpaper 5-23 in Section 5.

The following assumptions were used to develop the 12 month demand forecast for the New York jurisdiction:

- Based on requests for 100% interstate use services from existing customers, 20% of the forecasted virtual collocation arrangements in the New York jurisdiction will be ordered out of the interstate tariff.
- The average virtual service arrangement will include 100 DS1s and 10 DS3s.
- The average virtual service arrangement will include 2 equipment FDF to VSA arrangements.
- Based on current experience, the average virtual service arrangement will utilize 40 Amps of DC Power.

Revenue Forecast

The projected revenues were calculated by multiplying the proposed rates for the Expanded Interconnection Through Virtual Collocation rate elements by the projected demand. The projected annual revenues are displayed on Workpapers 5-23 in Section 5.

Cross-Elastic Impacts

Virtual collocation is usually requested when all physical collocation central office space is exhausted. Therefore, Bell Atlantic believes the impact of its virtual collocation service on existing physical collocation arrangements will be *de minimus*.

SECTION 5

WORKPAPERS

<u>Workpapers</u>	<u>Description</u>
5-1	Initial Application Cost / Rate Development
5-2	Augment Application Cost / Rate Development
5-3	Eng. & Impl. Cost / Rate Development - Bell Atlantic installed Equipment
5-4	Eng. & Impl. Cost / Rate Development - Vendor installed Equipment
5-5	Eng. & Impl. Cost / Rate Development - Bell Atlantic Augments VSA
5-6	Eng. & Impl. Cost / Rate Development - Hardware / Software Upgrades
5-7	Interconnection Access Cable (EIAC) Cost / Rate Development - DS1, DS3, and Optical Fiber
5-8	DS1 - VOCT Cable & Frame Termination Cost / Rate Development
5-9	DS1 - VOCT Cable & Frame Termination Investment Development
5-10	DS3 - VOCT Cable & Frame Termination Cost / Rate Development
5-11	DS3 - VOCT Cable & Frame Termination Investment Development
5-12	Optical Fiber - Cable and Frame Termination Cost / Rate Development
5-13	Optical Fiber - Cable & Frame Termination Investment Development
5-14	Entrance Outside Plant Fiber Termination Cost / Rate Development
5-15	Entrance Outside Plant Fiber Termination Investment Development
5-16	FDF to VSA - Equipment and Cabling Cost / Rate Development
5-17	FDF to VSA - Equipment and Cabling Investment Development
5-18	Equipment Support Cost / Rate Development
5-19	Equipment Support Investment Development
5-20	Spare Equipment Cabinet Space Cost / Rate Development
5-21	DC Power Cost / Rate Development
5-22	DC Power Investment Development
5-23	Demand, Cost, Rate, and Revenue Summary

**VIRTUAL COLLOCATED INTERCONNECTION
NONRECURRING COST DETAILS -
APPLICATION FEES**

Initial Application

<u>Line #</u>	<u>Activity</u>	<u>Job Function</u>	<u>Time/Hrs.</u>	<u>Labor Rate</u>	<u>Total Cost</u>
1.	Initial Site Survey	Network and C. O. Engineer	7	\$152.51	\$1,105.70
		Real Estate	1	\$45.56	\$45.56
2.	Engineering Evaluation	Network and C. O. Engineer	8	\$152.51	\$1,143.83
3.	Order Admin. & Billing	Network and C. O. Engineer	3	\$152.51	\$495.66
4.	Implementation Proposal Dev.	Collocation Marketing Staff	17	\$40.93	<u>\$709.32</u>
5.	Total Nonrecurring Cost				\$3,500.00
6.	Proposed Tariff Rate				\$3,500.00

**VIRTUAL COLLOCATED INTERCONNECTION
NONRECURRING COST DETAILS -
APPLICATION FEES**

Site Augmentation Application

<u>Line #</u>	<u>Activity</u>	<u>Job Function</u>	<u>Time/Hrs.</u>	<u>Labor Rate</u>	<u>Total Cost</u>
1.	Site Survey	Network and C. O. Engineer	3	\$152.51	\$495.66
		Real Estate	1	\$45.56	\$45.56
2.	Engineering Evaluation	Network and C. O. Engineer	3	\$152.51	\$420.17
3.	Order Admin. & Billing	Network and C. O. Engineer	2	\$152.51	\$231.71
4.	Implementation Proposal Dev.	Collocation Marketing Staff	8	\$40.93	<u>\$306.98</u>
5.	Total Nonrecurring Cost				\$1,500.00
6.	Proposed Tariff Rate				\$1,500.00

**VIRTUAL COLLOCATED INTERCONNECTION
NONRECURRING COST DETAILS -
ENGINEERING & IMPLEMENTATION FEES**

Bell Atlantic Installed Equipment

<u>Line #</u>	<u>Activity</u>	<u>Job Function</u>	<u>Time/Hrs.</u>	<u>Labor Rate</u>	<u>Total Cost</u>
1.	Site Survey	Network and C. O. Engineer	3	\$152.51	\$419.40
2.	Engineering Evaluation	Network and C. O. Engineer	2	\$152.51	\$289.77
3.	Engineering Preparation	Network and C. O. Engineer	23	\$152.51	\$3,507.73
		Transmission Engineer	2	\$92.21	\$183.50
4.	Administration & Billing	Network and C. O. Engineer	5	\$152.51	\$762.55
5.	Project Management	Network and C. O. Engineer	12	\$152.51	\$1,830.12
		Collocation Marketing Staff	12	\$40.93	\$491.16
6.	Implementation Work	Network and C. O. Engineer	13	\$152.51	\$1,982.63
		C. O. Technician	4	\$60.35	\$241.40
		Transmission Engineer	2	\$92.21	\$184.42
7.	Total Nonrecurring Cost				\$9,892.60
8.	Proposed Tariff Rate				\$9,892.60

**VIRTUAL COLLOCATED INTERCONNECTION
NONRECURRING COST DETAILS -
ENGINEERING & IMPLEMENTATION FEES**

Approved Vendor Installed Equipment

<u>Line #</u>	<u>Activity</u>	<u>Job Function</u>	<u>Time/Hrs.</u>	<u>Labor Rate</u>	<u>Total Cost</u>
1.	Site Survey	Network and C. O. Engineer	3	\$152.51	\$419.40
2.	Engineering Evaluation	Network and C. O. Engineer	2	\$152.51	\$289.77
3.	Engineering Preparation	Network and C. O. Engineer	23	\$152.51	\$3,507.73
		Transmission Engineer	2	\$92.21	\$183.50
4.	Administration & Billing	Network and C. O. Engineer	5	\$152.51	\$762.55
5.	Project Management	Network and C. O. Engineer	14	\$152.51	\$2,135.14
		Collocation Marketing Staff	16	\$40.93	<u>\$639.49</u>
6.	Total Nonrecurring Cost				\$7,937.50
7.	Proposed Tariff Rate				\$7,937.50

**VIRTUAL COLLOCATED INTERCONNECTION
NONRECURRING COST DETAILS -
ENGINEERING & IMPLEMENTATION FEES**

Bell Atlantic Augments VSA

<u>Line #</u>	<u>Activity</u>	<u>Job Function</u>	<u>Time/Hrs.</u>	<u>Labor Rate</u>	<u>Total Cost</u>
1.	Site Survey	Network and C. O. Engineer	3	\$152.51	\$419.40
2.	Engineering Evaluation	Network and C. O. Engineer	2	\$152.51	\$289.77
3.	Engineering Preparation	Network and C. O. Engineer	16	\$152.51	\$2,440.16
		Transmission Engineer	2	\$92.21	\$183.50
4.	Administration & Billing	Network and C. O. Engineer	2	\$152.51	\$305.02
5.	Project Management	Network and C. O. Engineer	12	\$152.51	\$1,753.87
		Collocation Marketing Staff	9	\$40.93	\$375.82
6.	Implementation Work	Network and C. O. Engineer	13	\$152.51	\$1,982.63
		C. O. Technician	4	\$60.35	\$241.40
		Transmission Engineer	2	\$92.21	\$184.42
7.	Total Nonrecurring Cost				\$8,176.08
8.	Proposed Tariff Rate				\$8,176.08

**VIRTUAL COLLOCATED INTERCONNECTION
NONRECURRING COST DETAILS -
ENGINEERING & IMPLEMENTATION FEES**

Hardware / Software Upgrades

<u>Line #</u>	<u>Activity</u>	<u>Job Function</u>	<u>Time/Hrs.</u>	<u>Labor Rate</u>	<u>Total Cost</u>
1.	Process Application	Collocation Marketing Staff	1	\$40.93	\$40.93
2.	Scheduling & Coordination	Network and C. O. Engineer	0.50	\$57.72	\$28.86
		Collocation Marketing Staff	2	\$40.93	\$81.86
3.	Implementation & Testing	C. O. Technician	1	\$60.35	<u>\$60.35</u>
4.	Total Nonrecurring Cost				\$212.00
5.	Proposed Tariff Rate				\$212.00

VIRTUAL COLLOCATED INTERCONNECTION
Expanded Interconnection Access Cable (EIAC)
Physical Cable Charge (Nonrecurring)

<u>LINE</u>	<u>ITEM</u>	<u>SOURCE</u>	<u>DS1 CABLE</u>	<u>DS3 CABLE</u>	<u>OPTICAL FIBER CABLE</u>
1	ABAM 22 GUAGE CABLE / PER FOOT	VENDOR MATERIAL PRICE	\$0.46		
2	SWBDCA 20 GUAGE CABLE / PER FOOT	VENDOR MATERIAL PRICE		\$0.46	
3	OPTICAL FIBER CABLE / PER FOOT	VENDOR MATERIAL PRICE			\$1.23
4	AVERAGE CABLE LENGTH (FEET)	ENGINEERING ESTIMATE	158	98	107
5	PHYSICAL CABLE MATERIAL INVESTMENT "1" Transmit & "1" Receive Cables	(L 1, 2, 3 X L 4) X 2	\$145.64	\$90.44	\$131.43
6	CABLE CONNECTORS	VENDOR MATERIAL PRICE		\$7.40	
7	TOTAL MATERIAL COST	L 5 + L 6	\$145.64	\$97.84	\$131.43
8	INSTALLATION & ENGINEERING FACTOR	BELL ATLANTIC	1.6494	1.6494	1.6494
9	TOTAL COST OF CABLE & INSTALLATION	L 7 * L 8	\$240.21	\$161.37	\$216.78
10	PROPOSED TARIFF CHARGE		\$240.21	\$161.37	\$216.78

VIRTUAL COLLOCATED INTERCONNECTION
Virtual Office Channel Termination - (VOCT)
DS1 - Cable and Frame Termination

<u>Line</u>	<u>Description</u>	<u>Source</u>	<u>Total</u>
1	Unit Investment	Workpaper 5-9, L 7	\$49.61
2	Depreciation	Cost Study	\$3.78
3	Cost of Money	Cost Study	\$1.67
4	Income Tax	Cost Study	\$0.67
5	Maintenance	Cost Study	\$3.93
6	Administration	Cost Study	\$0.81
7	Other Tax	Cost Study	\$0.79
8	Annual Direct Costs	Sum Lines 2 thru 9	\$11.65
9	Monthly Direct Cost	L10 / 12	\$0.97
10	Overhead Loading Factor	Commission Prescribed	1.3815
11	Fully Loaded Costs/Rate	Line 9 * Line 10	\$1.34
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	Cost Ratios		
12	Direct Cost to Investment	L8 / L1	0.2348
13	Direct Cost to Rate	L9 / L11	0.7239

VIRTUAL COLLOCATED INTERCONNECTION
Virtual Office Channel Termination - (VOCT)
DS1 - Cable and Frame Termination

<u>LINE</u>	<u>ITEM</u>	<u>SOURCE</u>	<u>TOTALS</u>
1	TOTAL CABLE INVESTMENT	Workpaper 5-7, L 5	\$145.64
2	UNIT INVESTMENT, Per Cable Pair	L1 / 30	\$4.85
3	DSX CROSS-CONNECT FRAME	VENDOR MATERIAL PRICE	\$706.25
4	UNIT INVESTMENT Per DS1 Termination (28)	L 3 / 28	\$25.22
5	CABLE & FRAME UNIT INVESTMENT	L 2 + L 4	\$30.08
6	INSTALLATION & ENGINEERING FACTOR	BELL ATLANTIC	1.6494
7	TOTAL UNIT INVESTMENT	L 4 X L 5	<div style="border: 1px solid black; padding: 2px;">\$49.61</div>

VIRTUAL COLLOCATED INTERCONNECTION
Virtual Office Channel Termination - (VOCT)
DS3 - Cable and Frame Termination

<u>Line</u>	<u>Description</u>	<u>Source</u>	<u>Total</u>
1	Unit Investment	Workpaper 5-11, L 6	\$1,067.90
2	Depreciation	Cost Study	\$82.38
3	Cost of Money	Cost Study	\$36.31
4	Income Tax	Cost Study	\$14.53
5	Maintenance	Cost Study	\$84.59
6	Administration	Cost Study	\$17.47
7	Other Tax	Cost Study	\$17.30
8	Annual Direct Costs	Sum Lines 2 thru 9	\$252.58
9	Monthly Direct Cost	L10 / 12	\$21.05
10	Overhead Loading Factor	Commission Prescribed	1.3200
11	Fully Loaded Costs/Rate	Line 9 * Line 10	\$27.78
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Cost Ratios			
12	Direct Cost to Investment	L8 / L1	0.2365
13	Direct Cost to Rate	L9 / L11	0.7576